INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
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Commissioner

100 North Senate Avenue
P.O. Box 6015
Indianapolis, Indiana 46206-6015
(317) 232-8603
(800) 451-6027
www.in.gov/idem

March 15, 2004

TO: Interested Parties / Applicant

RE: Liberty Landfill, Inc. / 181-18276-00035

FROM: Paul Dubenetzky
Chief, Permits Branch
Office of Air Quality

Notice of Decision: Approval - Effective Immediately

Please be advised that on behalf of the Commissioner of the Department of Environmental Management, I have issued a decision regarding the enclosed matter. Pursuant to IC 13-17-3-4 and 326 IAC 2, this approval is effective immediately, unless a petition for stay of effectiveness is filed and granted, and may be revoked or modified in accordance with the provisions of IC 13-15-7-1.

If you wish to challenge this decision, IC 4-21.5-3-7 and IC 13-15-7-3 require that you file a petition for administrative review. This petition may include a request for stay of effectiveness and must be submitted to the Office Environmental Adjudication, 100 North Senate Avenue, Government Center North, Room 1049, Indianapolis, IN 46204, **within eighteen (18) calendar days of the mailing of this notice**. The filing of a petition for administrative review is complete on the earliest of the following dates that apply to the filing:

(1) the date the document is delivered to the Office of Environmental Adjudication (OEA);
(2) the date of the postmark on the envelope containing the document, if the document is mailed to OEA by U.S. mail; or
(3) The date on which the document is deposited with a private carrier, as shown by receipt issued by the carrier, if the document is sent to the OEA by private carrier.

The petition must include facts demonstrating that you are either the applicant, a person aggrieved or adversely affected by the decision or otherwise entitled to review by law. Please identify the permit, decision, or other order for which you seek review by permit number, name of the applicant, location, date of this notice and all of the following:

(1) the name and address of the person making the request;
(2) the interest of the person making the request;
(3) identification of any persons represented by the person making the request;
(4) the reasons, with particularity, for the request;
(5) the issues, with particularity, proposed for considerations at any hearing; and
(6) identification of the terms and conditions which, in the judgment of the person making the request, would be appropriate in the case in question to satisfy the requirements of the law governing documents of the type issued by the Commissioner.

If you have technical questions regarding the enclosed documents, please contact the Office of Air Quality, Permits Branch at (317) 233-0178. Callers from within Indiana may call toll-free at 1-800-451-6027, ext. 3-0178.

Enclosures
FNPER-MOD.dot 9/16/03

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March 15, 2004

Mr. Barry Ledbetter
Liberty Landfill, Inc.
P.O. Box 17, 124 Twin Bridges Road
Danville, Indiana 46122

Re: 181-18276-00035
First Minor Source Modification to
Part 70 Permit No.: T181-7338-00035

Dear Mr. Ledbetter:

Liberty Landfill, Inc. was issued a Part 70 Operating Permit T181-7338-00035 on July 26, 1999 for a municipal solid waste landfill. An application to modify the source was received on December 1, 2003. Pursuant to 326 IAC 2-7-10.5, the following emission units are approved for modification at the source:

(a) One (1) Leachate Evaporation System, identified as E-Vap, constructed in 1998 and modified in 2004, with a maximum capacity of 10,000 gallons per day, controlled by an integral enclosed flare FL1. The evaporator has a maximum heat input rate of 6.6 MMBtu/hr, using landfill gas as fuel. This system is used to process the leachate generated from this landfill and dilute industrial wastewater received from other plants.

In addition, the source proposed to construct and operate the following insignificant units:

(a) Four (4) wastewater storage tanks, constructed in 2004, each with a maximum capacity of 8,000 gallons.

(b) One (1) wastewater storage tank, constructed in 2004, with a maximum capacity of 10,000 gallons.

The following construction conditions are applicable to the proposed project:

General Construction Conditions

1. The data and information supplied with the application shall be considered part of this source modification approval. Prior to any proposed change in construction which may affect the potential to emit (PTE) of the proposed project, the change must be approved by the Office of Air Quality (OAQ).

2. This approval to construct does not relieve the permittee of the responsibility to comply with the provisions of the Indiana Environmental Management Law (IC 13-11 through 13-20; 13-22 through 13-25; and 13-30), the Air Pollution Control Law (IC 13-17) and the rules promulgated thereunder, as well as other applicable local, state, and federal requirements.

3. Effective Date of the Permit
Pursuant to IC 13-15-5-3, this approval becomes effective upon its issuance.

4. Pursuant to 326 IAC 2-1.1-9 and 326 IAC 2-7-10.5(i), the Commissioner may revoke this approval if construction is not commenced within eighteen (18) months after receipt of this approval or if construction is suspended for a continuous period of one (1) year or more.

5. All requirements and conditions of this construction approval shall remain in effect unless modified in a manner consistent with procedures established pursuant to 326 IAC 2.

6. Pursuant to 326 IAC 2-7-10.5(l) the emission units constructed under this approval shall not be placed into operation prior to revision of the source's Part 70 Operating Permit to incorporate the required operation conditions.

The source may begin construction when the minor source modification has been issued. Operating conditions shall be incorporated into the Part 70 operating permit as a significant permit modification in accordance with 326 IAC 2-7-10.5(l)(2) and 326 IAC 2-7-12. Operation is not approved unit the significant permit modification has been issued.

Pursuant to Contract No. A305-0-00-36, IDEM, OAQ has assigned the processing of this application to Eastern Research Group, Inc., (ERG). Therefore, questions should be directed to Yu-Lien Chu, ERG, Morrisville, North Carolina 27560, or call (919) 468-7871 to speak directly to Ms. Chu. Questions may also be directed to Duane Van Laningham at IDEM, OAQ, 100 North Senate Avenue, P.O. Box 6015, Indianapolis, Indiana, 46206-6015, or call (800) 451-6027, and ask for Duane Van Laningham, or extension 3-6878, or dial (317) 233-6878.

Sincerely,

Original Signed by Paul Dubenetzky
Paul Dubenetzky, Chief
Permits Branch
Office of Air Quality

Attachments

ERG/YC

cc: File - White County
White County Health Department
Air Compliance Section Inspector - Wanda Stanfield
Compliance Data Section
Administrative and Development - Sara Cloe
Technical Support and Modeling - Michele Boner
Title V Renewal Reviewer - ERG/ST

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PART 70 OPERATING PERMIT

OFFICE OF AIR QUALITY

Liberty Landfill, Inc.
8635 E. State Road 16
Monticello, Indiana 47960

(herein known as the Permittee) is hereby authorized to operate subject to the conditions contained herein, the source described in Section A (Source Summary) of this permit.

This permit is issued in accordance with 326 IAC 2 and 40 CFR Part 70 Appendix A and contains the conditions and provisions specified in 326 IAC 2-7 and 326 IAC 2-1-3.2 as required by 42 U.S.C. 7401, et. seq. (Clean Air Act as amended by the 1990 Clean Air Act Amendments), 40 CFR Part 70.6, IC 13-15 and IC 13-17.

Operation Permit No.: T181-7338-00035	
Issued by: Janet G. McCabe, Assistant Commissioner Office of Air Quality	Issuance Date: July 26, 1999 Expiration Date: July 26, 2004

First Reopening No.: R 181-13538-00035, issued on December 10, 2001
First Administrative Amendment No.: 181-16918-00035, issued on May 7, 2003

First Minor Source Modification No: 181-18276-00035	
Issued by: Original Signed by Paul Dubenetzky Paul Dubenetzky, Branch Chief Office of Air Quality	Issuance Date: March 15, 2004

SECTION A SOURCE SUMMARY

This permit is based on information requested by the Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ). The information describing the source contained in conditions A.1, A.3, and A.4 is descriptive information and does not constitute enforceable conditions. However, the Permittee should be aware that a physical change or a change in the method of operation that may render this descriptive information obsolete or inaccurate may trigger requirements for the Permittee to obtain additional permits or seek modification of this permit pursuant to 326 IAC 2, or change other applicable requirements presented in the permit application.

A.1 General Information [326 IAC 2-7-4(c)] [326 IAC 2-7-5(15)]

The Permittee owns and operates a stationary municipal solid waste landfill (MSLWLF)

Responsible Official:	Director of Operations
Source Address:	8635 E. State Road 16, Monticello, IN 47960
Mailing Address:	8635 E. State Road 16, Monticello, IN 47960
SIC Code:	4953
County Location:	White
Source Location Status:	Attainment for all criteria pollutants
Source Status:	Part 70 Permit Program Minor Source under PSD Rules Minor Source, Section 112 of the Clean Air Act Not 1 of 28 Source Categories

A.2 Part 70 Source Definition [326 IAC 2-7-1(22)]

This landfill site consists of a source with an on-site contractor:

(a) Liberty Landfill, Inc., the primary operation, owns and operates a municipal solid waste landfill, located at 8653 East State Road 16, Monticello, Indiana 47960 (SIC: 4953); and

(b) Giroux Energy, Inc., an on-site contractor, purchases and utilizes the landfill gas generated from Liberty Landfill, Inc.

IDEM has determined that Liberty Landfill, Inc. and Giroux Energy, Inc. are considered one source due to contractural control. Therefore, the term “source” in the Part 70 documents refers to both Liberty Landfill, Inc. and Giroux Energy, Inc. as one source.

A.3 Emission Units and Pollution Control Equipment Summary [326 IAC 2-7-4(c)(3)] [326 IAC 2-7-5(15)]

This stationary source consists of the following emission units:

(a) One (1) solid waste disposal facility having the meaning described in 40 CFR 60.751 pertaining to all contiguous land and structures, other appurtenances (including haul roads), and improvements on the land used for disposal of solid waste and has a design capacity of 10,140,000 Megagrams.

(b) One (1) gas collection system (GCS) designed and having a capacity in accordance with the applicable provisions of 40 CFR 60, Subpart WWW and having emissions controlled by those control devices as listed in A.2(c) and A.2(d).

(c) One (1) enclosed ground flare, identified as FL1, installed in 1998, with a combustion capacity of 2,500 cubic feet per minute of landfill gas (LFG) per hour.

(d) One (1) Leachate Evaporation System identified as E-Vap, installed in 1998 and modified in 2004, with a maximum evaporation rate of 12,000 gallons per day, controlled by an integral enclosed flare FL1. The evaporator has a maximum heat input rate of 6.6 MMBtu/hr, using landfill gas as fuel. This system is used to process the leachate generated from this landfill and dilute industrial wastewater received from other plants.

A.4 Specifically Regulated Insignificant Activities [326 IAC 2-7-1(21)] [326 IAC 2-7-4(c)] [326 IAC 2-7-5(15)]

This stationary source also includes the following insignificant activities which are specifically regulated, as defined in 326 IAC 2-7-1(21):

(a) Space heaters, process heaters, or boilers using the following fuels:

(1) Natural gas-fired combustion sources with heat input equal to or less than ten million (10,000,000) Btu per hour.

(2) Fuel oil-fired combustion sources with heat input equal to or less than two million (2,000,000) Btu per hour and firing fuel containing less than five-tenths (0.5) percent sulfur by weight.

(b) A petroleum fuel, other than gasoline, dispensing facility having a storage capacity less than or equal to 10,500 gallons, and dispensing less than or equal to 230,000 gallons per month.

(c) Purging of gas lines and vessels that is related to routing maintenance and repair of buildings, structures, or vehicles at the source where air emissions from those activities would not be associated with any production process.

(d) Degreasing operations that do not exceed 145 gallons per 12 months, except if subject to 326 IAC 20-6.

(e) Application of oils, greases, lubricants, or other nonvolatile materials applied as temporary protective coatings.

(f) Equipment used exclusively for the following:

(1) Filling drums, pails or other packaging containers with lubricating oils, waxes, and greases.

(g) The following VOC and HAP storage containers:

(1) Storage tanks with capacity less than or equal to 1,000 gallons and annual throughput less than 12,000 gallons.

(2) Vessels storing lubricating oils, hydraulic oils, machining oils, and machining fluids.

(h) Paved and unpaved roads and parking lots with public access.

(i) Emergency generators as follows:

(1) Diesel generators not exceeding 1600 horsepower.

A.5 Part 70 Permit Applicability [326 IAC 2-7-2]

This stationary source is required to have a Part 70 permit by 326 IAC 2-7-2 (Applicability) because:

(a) It is a major source, as defined in 326 IAC 2-7-1(22);

(b) It is a source in a source category designated by the United States Environmental Protection Agency (U.S. EPA) under 40 CFR 70.3 (Part 70 - Applicability).

SECTION D.1 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]

(a) One (1) solid waste disposal facility having the meaning described in 40 CFR 60.751 pertaining to all contiguous land and structures, other appurtenances (including haul roads), and improvements on the land used for disposal of solid waste and has a design capacity of 10,140,000 Megagrams.

(b) One (1) gas collection system (GCS) designed and having a capacity in accordance with the applicable provisions of 40 CFR 60, Subpart WWW and having emissions controlled by those control devices as listed in A.2(c) and A.2(d).

(c) One (1) enclosed ground flare, identified as FL1, installed in 1998, with a combustion capacity of 2,500 cubic feet per minute of landfill gas (LFG) per hour.

(d) One (1) Leachate Evaporation System identified as E-Vap, installed in 1998 and modified in 2004, with a maximum evaporation rate of 12,000 gallons per day, controlled by an integral enclosed flare FL1. The evaporator has a maximum heat input rate of 6.6 MMBtu/hr, using landfill gas as fuel. This system is used to process the leachate generated from this landfill and dilute industrial wastewater received from other plants.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.1.1 General Provisions Relating to NSPS and NESHAP [326 IAC 12-1][40 CFR Part 60, Subpart A] and to HAPs [326 IAC 14-1-1][40 CFR Part 61, Subpart A] [326 IAC 20-1] [40 CFR 63, Subpart AAAA]

(a) The provisions of 40 CFR Part 60, Subpart A - General Provisions, which are incorporated by reference in 326 IAC 12-1, apply to the facility described in this section except when otherwise specified in 40 CFR Part 60, Subpart WWW, or as specified by approved variances contained within the Collection and Control Design Plan.

(b) The provisions of 40 CFR Part 61, Subpart A - General Provisions, which are incorporated as 326 IAC 14-1-1, apply to the facility described in this section except when otherwise specified in 40 CFR Part 61, Subpart M.

(c) The provisions of 40 CFR Part 63, Subpart A - General Provisions, which are incorporated by reference in 326 IAC 20-1-1, apply to the facility described in this section except when otherwise specified in 40 CFR Part 63, Subpart AAAA, or as specified by approved variances contained within the Collection and Control Design Plan.

D.1.2 Non-applicability Determination

The municipal solid waste landfill is not subject to the provisions of the following 40 CFR Part 60 Subparts: Cc, D, Da, Db, Dc, E, Ea, Eb, K, Ka, Kb, O, GG, and OOO.

D.1.3 Municipal Solid Waste Landfill NSPS [326 IAC 12] [40 CFR 60.752, Subpart WWW]

The municipal solid waste landfill has a design capacity greater than 2.5 million megagrams (Mg) and shall comply with 40 CFR 60.752.

D.1.4 Municipal Solid Waste Landfill NESHAP [40 CFR 63, Subpart AAAA]

The municipal solid waste landfill has a design capacity greater than 2.5 million megagrams (Mg) and has estimated uncontrolled NMOC emissions greater than 50 Mg/yr. Therefore, this landfill shall comply with 40 CFR 63, Subpart AAAA.

D.1.5 Operational Standards for Collection and Control Systems [40 CFR 60.753]

In order to comply with 40 CFR 60.752 (b)(2)(ii) the Permittee shall:

(a) Operate the collection system such that gas is collected from each area, cell, or group of cells in the municipal solid waste landfill in which solid waste has been in place for five years if active or 2 years or more if closed or at final grade.

(b) Operate the collection system with negative pressure at each wellhead except under the following conditions:

(1) Fire or increased well temperature. The Permittee shall record instances when positive pressure occurs in efforts to avoid a fire. These records shall be submitted with the annual reports as provided in 40 CFR 60.757(f)(1).

(2) Use of a geomembrane or synthetic cover. The Permittee shall develop acceptable pressure limits in the design plan.

(3) A decommissioned well. A well may experience a static positive pressure after shut down to accommodate for declining flows. All design changes shall be approved by the Office of Air Quality (OAQ).

(c) Operate each interior wellhead in the collection system with a landfill gas temperature less than the following and with either a nitrogen level less than 20 percent or an oxygen level less than 5 percent.

(1) Less than 138?F for well #50;

(2) Less than 135?F for well #51; and

(3) Less than 131?F (55?C) for other wells.

The Permittee may establish a higher operating temperature, nitrogen, or oxygen value at a particular well. A higher operating value demonstration shall show supporting data that the elevated parameter does not cause fires or significantly inhibit anaerobic decomposition by killing methanogens.

(4) The nitrogen level shall be determined using Method 3C, unless an alternative method is established as allowed by 40 CFR 60.752 (b)(2)(i).

(5) Unless an alternative test method is established as allowed by 40 CFR 60.752 (b)(2)(i), the oxygen shall be determined by an oxygen meter using Method 3A except that; the span shall be set so that the regulatory limit is between 20 and 50 percent of the span; a data recorder is not required; only two calibration gases are required, a zero and span, and ambient air may be used as the span; a calibration error check is not required; the allowable sample bias, zero drift, and calibration drift are ±10 percent.

(d) Operate the collection system so that the methane concentration is less than 500 parts per million above background at the surface of the landfill. To determine if this level is exceeded, the Permittee shall conduct surface testing around the perimeter of the collection area and along a pattern that traverses the landfill at 30 meter intervals and where visual observations indicate elevated concentrations of landfill gas, such as distressed vegetation and cracks or seeps in the cover. The Permittee may establish an alternative traversing pattern that ensures equivalent coverage. A surface monitoring design plan shall be developed that includes a topographical map with the monitoring route and the rationale for any site-specific deviations from the 30 meter intervals. Areas with steep slopes or other dangerous areas may be excluded from the surface testing.

(e) Operate the system such that all collected gases are vented to a control system designed and operated in compliance with 40 CFR 60.752(b)(2)(iii). In the event the collection or control system is inoperable, the gas mover system shall be shut down and all valves in the collection and control system contributing to venting of the gas to the atmosphere shall be closed within one hour.

(f) Operate the control system at all times when the collected gas is routed to the system.

(g) If monitoring demonstrates that the operational requirements in 40 CFR 60.753(b), (c), or (d) are not met, corrective action shall be taken as specified in 40 CFR 60.755(a)(3) through (5) or 40 CFR 60.755(c). If corrective actions are taken as specified in 40 CFR 60.755, the monitored exceedance is not a violation of the operational requirements in 40 CFR 60.753.

D.1.6 Particulate Matter (PM) [326 IAC 6-3-2(c)]

Pursuant to CP 181-9216-00035, issued on March 23, 1998, the particulate matter (PM) from the LES shall be limited by the following:

P = process weight in ton/hr = 10,000 gal/day * 8.33 lb/gal * day/24 hr = 1.74 ton/hr

Allowable PM emissions $= 4.10 * P^{0.67}$
$= 4.10 * (1.74)^{0.67} = 5.94$ lb/hr = 26.01 ton/yr

D.1.7 NESHAP for Asbestos Active Waste Disposal Sites [40 CFR 61.154]

In order to comply with 40 CFR 61.154 the Permittee must comply with the following:

(a) allow no visible emissions to the outside air from any active waste disposal site where asbestos-containing waste material has been deposited, or comply with (2) or (3) below.

(b) At least once every 24-hour period, asbestos-containing waste material that has been deposited during the previous 24-hour period must:

(1) be covered with at least 15 centimeters (6 inches) of compacted nonasbestos containing material, or

(2) be covered with a resinous or petroleum-based dust suppression agent that effectively binds dust and controls wind erosion. Such an agent shall be used in the manner and frequency recommended for the particular dust by the dust suppression agent manufacturer to achieve and maintain dust control. Other equally effective dust suppression agents may be used upon prior approval by the Administrator. Any used, spent, or other waste oil is not considered a dust suppression agent.

(c) Use an alternate emissions control method that has received prior written approval by the Administrator.

(d) Also, unless a natural barrier deters access by the general public, warning signs and fencing must be installed or the requirements of paragraph (2)(a) above must be met.

D.1.8 Municipal Solid Waste Landfill NESHAP [326 IAC 20] [40 CFR 63, Subpart AAAA]

Pursuant to 40 CFR 63.1955, the Permittee shall:

(a) Comply with the requirements of 40 CFR 60, Subpart WWW.

(b) If the Permitee is required by 40 CFR 60.752(b)(2) to install a collection and control system, the Permittee shall comply with the general and continuing compliance requirements in 40 CFR 63.1960 through 40 CFR 63.1985.

(c) For approval of collection and control systems that include any alternatives to the operational standards, test methods, procedures, compliance measures, monitoring, recordkeeping or reporting provisions, the Permittee must follow the procedures in 40 CFR 60.752(b)(2). If alternatives have already been approved under 40 CFR part 60 subpart WWW or the Federal plan, or EPA approved and effective State or tribal plan, these alternatives can be used to comply with this subpart, except that all affected sources must comply with the startup, shutdown, and malfunction (SSM) requirements in Subpart A of this part as specified in Table 1 of this subpart and all affected sources must submit compliance reports every 6 months as specified in 40 CFR 63.1980(a) and (b), including information on all deviations that occurred during the 6-month reporting period. Deviations (as defined in 40 CFR 63.1965) for continuous emission monitors or numerical continuous parameter monitors must be determined using a 3 hour monitoring block average (as defined in 40 CFR 63.1975).

D.1.9 Minor Source Modification Limits [326 IAC 2-7-10.5][326 IAC 8-1-6]

(a) The VOC content of the received waste water is less than 0.56 lbs/gal. Based on the maximum evaporation rate of 12,000 gal/day and 98% control efficiency, this is equivalent to 24.5 ton tons/yr of VOC emissions. Therefore, the requirements of 326 IAC 8-1-6 (BACT) and 326 IAC 2-7-10.5(f) (Part 70 Significant Source Modification) are not applicable. Any change or modification which may increase the VOC content of the received waste water to greater than 0.56 lbs/gal must be approved by IDEM, OAQ before any such change may occur.

(b) The HAP content for a single HAP of the received waste water is less than 0.22 lbs/gal. Based on the maximum evaporation rate of 12,000 gal/day and 98% control efficiency, this is equivalent to 9.64 ton tons/yr of HAP emissions. Therefore, the requirements of 326 IAC 2-4.1 (MACT) and 326 IAC 2-7-10.5(f) (Part 70 Significant Source Modification) are not applicable. Any change or modification which may increase the HAP content for a single HAP of the received waste water to greater than 0.22 lbs/gal must be approved by IDEM, OAQ before any such change may occur.

(c) The total HAP content of the received waste water is less than 0.56 lbs/gal. Based on the maximum evaporation rate of 12,000 gal/day and 98% control efficiency, this is equivalent to 24.5 ton tons/yr of HAP emissions. Therefore, the requirements of 326 IAC 2-4.1 (MACT) and 326 IAC 2-7-10.5(f) (Part 70 Significant Source Modification) are not applicable. Any change or modification which may increase the total HAP content of the received waste water to greater than 0.56 lbs/gal must be approved by IDEM, OAQ before any such change may occur.

Compliance Determination Requirements

D.1.10 Testing Requirements [326 IAC 2-7-6(1),(6)] [40 CFR 60.754(b)]

(a) After installation of a collection and control system in compliance with 40 CFR 60.755, the Permittee shall calculate the non methane organic compound (NMOC) emission rate for purposes of determining when the system can be removed using the following equation:

$M_{NMOC} = 1.89 \times 10^{-3} Q_{LFG} C_{NMOC}$

where

M_{NMOC} = mass emission rate of NMOC, megagrams per year
Q_{LFG} = flow rate of landfill gas, cubic meters per minute
C_{NMOC} = NMOC concentration, parts per million by volume as hexane

(1) The flow rate of landfill gas, Q_{LFG}, shall be determined by measuring the total landfill gas flow rate at the common header pipe that leads to the control device using a gas flow measuring device calibrated according to the provisions of section 4 of Method 2E of appendix A of 40 CFR 60.

(2) The average NMOC concentration, C_{NMOC}, shall be determined by collecting and analyzing landfill gas sampled from the common header pipe before the gas moving or condensate removal equipment using the procedures in Method 25C or Method 18 of appendix A of 40 CFR 60. If using Method 18 of Appendix A of 40 CFR 60, the minimum list of compounds to be tested shall be those published in the most recent Compilation of Air Pollutant Emission Factors (AP-42). The sample location on the common header pipe shall be before any condensate removal or other gas refining units. The Permittee shall divide the NMOC concentration from Method 25C of Appendix A of 40 CFR 60 by six to convert from C_{NMOC} as carbon to C_{NMOC} as hexane.

(3) The Permittee may use another method to determine landfill gas flow rate and NMOC concentration if the method has been approved by the Office of Air Quality (OAQ).

(b) Pursuant to 40 CFR 60.754(d):
For the performance testing required in 40 CFR 60.752(b)(2)(iii)(B), Method 25 or Method 18 of appendix A of 40 CFR 60 shall be used to determine

compliance with 98% reduction weight percent efficiency of NMOC from the control device or the 20 ppmv hexane on a dry basis at 3% oxygen outlet concentration level, or if the control device is an open flare, 40 CFR 60.18 procedures can be used, unless another method to demonstrate compliance has been approved by the Office of Air Quality (OAQ) as

provided by 40 CFR 60.752(b)(2)(i)(B). If using Method 18 of appendix A, the minimum list of compounds to be tested shall be those published in the most recent Compilation of Air Pollutant Emission Factors (AP-42). The following equation shall be used to calculate efficiency:

Control Efficiency = $(NMOC_{in} - NMOC_{out})/ (NMOC_{in})$

where

$NMOC_{in}$ = mass of NMOC entering the control device
$NMOC_{out}$ = mass of NMOC exiting control device

D.1.11 Compliance Determination [40 CFR 63.1960]

Pursuant to 40 CFR 63.1960, compliance with 40 CFR 63, Subpart AAAA is determined by the following:

(a) The same way it is determined for 40 CFR 60, Subpart WWW, including performance testing, monitoring of the collection system, continuous parameter monitoring, and other credible evidence.

(b) Continuous parameter monitoring data, collected under 40 CFR 60.756(b)(1), (c)(1), and (d) of subpart WWW, are used to demonstrate compliance with the operating conditions for control systems. If a deviation (as defined in 40 CFR 63.1965) occurs, the Permitee has failed to meet the control device operating conditions described in 40 CFR 60, Subpart WWW and has deviated from the requirements of this subpart.

(c) The Permittee must develop and implement a written SSM plan according to the provisions in 40 CFR 63.6(e)(3). A copy of the SSM plan must be maintained on site. Failure to write, implement, or maintain a copy of the SSM plan is a deviation from the requirements of this subpart.

Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

D.1.12 Monitoring [40 CFR 60.756]

Except as provided in 40 CFR 60.752(b)(2)(i)(B),

(a) The Permittee seeking to comply with 40 CFR 60.752(b)(2)(ii)(A) for an active gas collection shall install a sampling port and a thermometer, other temperature measuring device or an access port for temperature measurements at each wellhead and:

(1) Measure the gauge pressure in the gas collection header on a monthly basis as provided in 40 CFR 60.755(a)(3);

(2) Monitor nitrogen or oxygen concentration in the landfill gas on a monthly basis as provided in 40 CFR 60.755(a)(5); and

(3) Monitor temperature of the landfill gas on a monthly basis as provided in 40 CFR 60.755(a)(5).

(b) The Permittee seeking to comply with 40 CFR 60.752(b)(2)(iii) using an enclosed combustor shall calibrate, maintain, and operate according to the manufacturer's specifications, the following equipment:

(1) A temperature monitoring device equipped with a continuous recorder and having a minimum accuracy of ±1 percent of the temperature being measured expressed in degrees Celsius of ±0.5 ?C, whichever is greater. A temperature monitoring device is not required for boilers or process heaters with design heat input capacity greater than 44 megawatts.

(2) A device that records flow to or bypass of the control device. The Permittee shall either; install, calibrate, and maintain a gas flow rate measuring device that shall record the flow to the control device at least every fifteen (15) minutes; or secure the bypass line valve in the closed position with a car-seal or a lock-and-key type configuration.

A visual inspection of the seal or closure mechanism shall be performed at least once every month to ensure that the valve is maintained in the closed position and that the gas flow is not diverted through the bypass line.

(c) The Permittee seeking to comply with 40 CFR 60.752(b)(2)(iii) using an open flare shall install, calibrate, maintain, and operate according to the manufacturer's specifications the following equipment:

(1) Heat sensing device, such as an ultraviolet beam sensor or thermocouple, at the pilot light or the flame itself to indicate the continuous presence of a flame

(2) A device that records flow to or bypass of the flare.

The Permittee shall either install, calibrate, and maintain a gas flow rate measuring device that shall record the flow to the control device at least every fifteen minutes; or secure the bypass line valve in the closed position with a car-seal or a lock-and-key type configuration. A visual inspection of the seal or closure of the seal or closure mechanism shall be performed at least once every month to ensure that the valve is maintained in the closed position and that the gas flow is not diverted through the bypass line.

(d) The Permittee seeking to comply with 40 CFR 6.752(b)(2)(iii) using a device other than an open flare or an enclosed combustor shall provide information satisfactory to the Office of Air Quality (OAQ) as provided in 40 CFR 60.752(b)(2)(i)(B) describing the operation of the control device, the operating parameters that would indicate proper performance, and appropriate monitoring procedures. The Office of Air Quality (OAQ) shall review the information and either approve it, or request that additional information be submitted. The Office of Air Quality (OAQ) may specify additional monitoring procedures.

(e) The Permittee seeking to install a collection system that does not meet the specifications in 40 CFR 60.759 or seeking to monitor alternative parameters to those required by 40 CFR 60.753 through 40 CFR 60.756 shall provide information satisfactory to the Office of Air Quality (OAQ) as provided in 40 CFR 60.752(b)(2)(i)(B) and (C) describing the design and operation of the collection system, the operating parameters that would indicate proper performance, and appropriate monitoring procedures. The Office of Air Quality (OAQ) may specify additional appropriate monitoring procedures.

(f) The Permittee seeking to demonstrate compliance with 40 CFR 60.755(c), shall monitor surface concentrations of methane according to the instrument specifications and procedures provided in 40 CFR 60.755(d). Any closed landfill that has no monitored exceedances of the operational standard in three consecutive quarterly monitoring periods may skip to annual monitoring. Any methane reading of 500 ppm or more above background detected during the annual monitoring returns the frequency for that landfill to quarterly monitoring.

D.1.13 Compliance Provisions [40 CFR 60.755]

(a) Except as provided in 40 CFR 60.752(b)(2)(i)(B), the specified methods below shall be used to determine whether the gas collection system is in compliance with 40 CFR 60.752(b)(2)(i).

(1) For the purpose of calculating the maximum expected gas generation flow rate from the landfill to determine compliance with 60.752(b)(2)(ii)(A)(1), one of the following equations shall be used. The k and L_o kinetic factors should be those published in the most recent Compilation of Air Pollution Emission Factors (AP-

42) or other site-specific values demonstrated to be appropriate and approved by the Office of Air Quality (OAQ). If k has been determine as specified in 40 CFR 60.754(a)(4), the value of k determined from the test shall be used. A value of no more than 15 years shall be used for the intended use period of the gas mover equipment. The active life of the landfill is the age of the landfill plus the estimated number of years until closure.

For sites with unknown year-to-year solid waste acceptance rate:

$$Q_m = 2L_o R (e^{-kc} - e^{-kt})$$

where,

Q_m = maximum expected gas generation flow rate, cubic meters per year
L_o = methane generation potential, cubic meters per megagram solid waste
R = average annual acceptance rate, megagrams per year
k = methane generation rate constant, $year^{-1}$
t = age of the landfill at equipment installation plus the time the owner or operator intends to use the gas mover equipment or active life of the landfill, whichever is less. If the equipment is installed after closure, t is the age of the landfill at installation, years.
c = time since closure, years (for an active landfill c = 0 and e^{kc} = 1)

For sites with known year-to-year solid waste acceptance rate:

$$Q_M = \sum_{i=1}^{n} 2 k L_O M_i (e^{-kt}i)$$

where,

Q_M = maximum expected gas generation flow rate, cubic meters per year
k = methane generation rate constant, $year^{-1}$
L_o = methane generation potential, cubic meters per megagram solid waste
M_i = mass of solid waste in the i^{th} section, megagrams
t_i = age of the i^{th} section, years

If a collection and control system has been installed, actual flow data may be used to project the maximum expected gas generation flow rate instead of, or in conjunction with, the equations in 40 CFR 60.755(a)(1)(i) and (ii). If the landfill is still accepting waste, the actual measured flow data will not equal the maximum expected gas generation rate, so calculations using the equations in 40 CFR 60.755(a)(1)(i) or (ii) or other methods shall be used to predict the maximum expected gas generation rate over the intended period of use of the gas control system equipment.

(2) For the purposes of determining sufficient density of gas collector for compliance with 40 CFR 60.752 (b)(2)(ii)(A)(2), the Permittee shall design a system of vertical wells, horizontal collectors, or other collection devices, satisfactory to the Office of Air Quality (OAQ), capable of controlling and extracting gas from all portions of the landfill sufficient to meet all operational and performance standards.

(3) For the purpose of demonstrating whether the gas collection system flow rate is sufficient to determine compliance with 40 CFR 60.752(b)(2)(ii)(A)(3), the Permittee shall measure gauge pressure in the gas collection header at each individual well, monthly. If a positive pressure exists, action shall be initiated to correct the exceedance within five (5) calendar days, except for the three conditions allowed under 40 CFR 60.753(b). If negative pressure cannot be achieved without excess air infiltration within fifteen (15) calendar days of the first measurement, the gas collection system shall be expanded to correct the exceedance within 120 days of the initial measurement of positive pressure. Any attempted corrective measure shall not cause exceedances of other operational or performance standards. An alternative timeline for correcting the exceedance may be submitted to the Administrator for approval.

(4) The Permittee is not required to expand the system as required in 40 CFR 60.755(a)(3) during the first 180 days after gas collection system start-up.

(5) For the purpose of identifying whether excess air infiltration into the landfill is occurring, the Permittee shall monitor each well monthly for temperature and nitrogen or oxygen as provided in 40 CFR 60.753(c). If a well exceeds one of these operating parameters, action shall be initiated to correct the exceedance within five (5) calendar days. If correction of the exceedance cannot be achieved within fifteen (15) calendar days of the first measurement, the gas collection system shall be expanded to correct the exceedance within 120 days of the initial exceedance. Any attempted corrective measure shall not cause exceedances of other operational or performance standards. An alternative timeline for correcting the exceedance may be submitted to the Administrator for approval.

(6) If the Permittee seeks to demonstrate compliance with 40 CFR 60.752(b)(2)(ii)(A)(4) through the use of a collection system not conforming to the specifications provided in 40 CFR 60.759 shall provide information satisfactory to the Office of Air Quality (OAQ) as specified in 40 CFR 60.752 (b)(2)(i)(C) demonstrating that off-site migration is being controlled.

(b) For purposes of compliance with 40 CFR 60.753(a), the Permittee shall place each well or design component of a controlled landfill as specified in the approved design plan as provided in 40 CFR 60.752(b)(2)(i). Each well shall be installed no later than 60 days after the date on which the initial solid waste has been in place for a period of five (5) years or more if active or two (2) years or more if closed or at final grade.

(c) The following procedures shall be used for compliance with the surface methane operational standard as provided in 40 CFR 60.753 (d):

(1) After installation of the collection system, the Permittee shall monitor surface concentrations of methane along the entire perimeter of the collection area and along a pattern that traverses the landfill at 30 meter intervals (or a site-specific established spacing) for each collection area on a quarterly basis using an organic vapor analyzer, flame ionization detector, or other portable monitor meeting the specifications provided in 40 CFR 60.755(d).

(2) The background concentration shall be determined by moving the probe inlet upwind and downwind outside the boundary of the landfill at a distance of at least 30 meters from perimeter wells.

(3) Surface emission monitoring shall be performed in accordance with section 4.3.1 of Method 21 of appendix A of 40 CFR60, except that the probe inlet shall be placed within five(5) to ten(10) centimeters of the ground. Monitoring shall be performed during typical meteorological conditions.

(4) Any reading of 500 parts per million or more above background at any location shall be recorded as a monitored exceedance and the actions specified in 40 CFR 60.755(c)(4)(i) through (v) should be taken. As long as the specified actions are taken, the exceedance is not a violation of the operational requirements of 40 CFR 60.753(d).

The location of each monitored exceedance shall be marked and the location recorded.

Cover maintenance or adjustments to the vacuum of the adjacent wells to increase the gas collection in the vicinity of each exceedance shall be made and the location shall be re-monitored with ten (10) calendar days of detecting the exceedance.

If the re-monitoring of the location shows a second exceedance, additional corrective action shall be taken and the location shall be monitored again within ten (10) days of the second exceedance. If re-monitoring shows a third exceedance for the same location, the action specified in paragraph 40 CFR 60.755(c)(4)(v) shall be taken, and no further monitoring of that location is required until the action specified in 40 CFR 60.755(c)(4)(v) has been taken.

Any location that initially showed an exceedance but has a methane concentration less than 500 ppm methane above background at the 10-day re-monitoring specified in 40 CFR 60.755(c)(4)(ii) or (iii) shall be re-monitored one (1) month from the initial exceedance. If the one (1)-month re-monitoring shows a concentration less than 500 parts per million above background, no further monitoring of that location is required until the next quarterly monitoring period. If the one (1)-month remonitoring shows an exceedance, the actions specified in 40 CFR 60.755(c)(4)(iii) or (v) shall be taken.

For any location where monitored methane concentration equals or exceeds 500 parts per million above background three times within a quarterly period, a new well or other collection device shall be installed within 120 calendar of the initial exceedance. An alternative remedy to the exceedance, such as upgrading the blower, header pipes or control device, and a corresponding timeline for installation may be submitted to the Office of Air Quality (OAQ) for approval.

(5) The Permittee shall implement a program to monitor for cover integrity and implement cover repairs as necessary on a monthly basis.

(d) The Permittee seeking to comply with the provisions of 40 CFR 60.755(c) shall comply with the following instrumentation specifications and procedures for surface emission monitoring devices:

(1) The portable analyzer shall meet the instrument specifications provided in section 3 of Method 21 of appendix A of 40 CFR 60, except that “methane” shall replace all references to volatile organic compound (VOC).

(2) The calibration gas shall be methane, diluted to a nominal concentration of 500 parts per million in air.

(3) To meet the performance evaluation requirements in section 3.1.3 of Method 21 of appendix A of 40 CFR 60, the instrument evaluation procedures of section 4.4 of Method 21 of appendix A of 40 CFR 60 shall be used.

(4) The calibration procedures provided in section 4.2 of Method 21 of appendix A of 40 CFR 60 shall be followed immediately before commencing a surface monitoring survey.

(e) The provisions of 40 CFR 60.755 shall apply at all times, except during periods of start-up, shutdown, or malfunction, provided that the duration of start-up, shutdown, or malfunction, shall not exceed five (5) days for collection systems and shall not exceed one (1) hour for treatment or control devices.

Record Keeping and Reporting Requirement [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

D.1.14 Calculation of Non-methane Organic Compound (NMOC) Rate [40 CFR 60.754]

Pursuant to 40 CFR 60.754 the Permittee shall:

(a) Calculate the non methane organic compound (NMOC) emission rate using either equation provided in 40 CFR 60.754(a)(1)(i) or the equation provided in 40 CFR 60.754(a)(1)(ii). Both equations may be used if the actual year-to-year solid waste acceptance rate is known, as specified in 40 CFR 754(a)(1)(i), for part of the life of the landfill and the actual year-to-year solid waste acceptance rate is unknown, as specified in 40 CFR 754(a)(1)(i), for part of the life of the landfill. The values to be used in both equations are 0.05 per year for k, 170 cubic meters per megagram for L_o, and 4,000 parts per million by volume as hexane for the C_{NMOC}. For landfills located in geographical areas with a thirty year annual average precipitation of less than 25 inches, as measured at the nearest representative official meteorologic site, the k value to be used is 0.02 per year.

The following equation shall be used if the actual year-to-year solid waste acceptance rate is known:

$$M_{NMOC} = \sum_{i=1}^{n} 2\ k\ L_O\ M_i\ (e^{-kt}i)\ (C_{NM}\ OC)\ (3.6x10^{-9})$$

where,

M_{NMOC}= Total NMOC emission rate from the landfill, megagrams per year
k = methane generation rate constant, $year^{-1}$
L_o= methane generation potential, cubic meters per megagram solid waste
M_i= mass of solid waste in the i^{th} section, megagrams
t_i= age of the i^{th} section, years
C_{NMOC}= concentration of NMOC, parts per million by volume as hexane
3.6×10^{-9}= conversion factor

The mass of the nondegradable solid waste may be subtracted from the total mass of solid waste in a particular section of the landfill when calculating the value for M_i if the documentation provisions of 40 CFR 60.758(d)(2) are followed.

The following equation shall be used if the actual year-to-year solid waste acceptance rate is unknown:

$$M_{NMOC} = 2\ L_o\ R\ (e^{-kc} - e^{-kt})(C_{NMOC})(3.6 \times 10^{-9})$$

where,

M_{NMOC} = mass emission rate of NMOC, megagrams per year
L_o = methane generation potential, cubic meters per megagram solid waste
R = average annual acceptance rate, megagrams per year
k = methane generation rate constant, year $^{-1}$
t = age of landfill, years
C_{NMOC} = concentration of NMOC, parts per million by volume as hexane
c = time since closure, years. For active landfill c = 0 and e^{-kc} = 1
3.6×10^{-9} = conversion factor

The mass of the nondegradable solid waste may be subtracted from the total mass of solid waste in a particular section of the landfill when calculating the value for M_i if the documentation provisions of 40 CFR 60.758(d)(2) are followed.

If the calculated non methane organic compound (NMOC) emission rate is equal to or greater than 50 megagrams per year, then the Permittee shall either comply with the provisions of 40 CFR 60.752 (b)(2) or determine a site-specific non methane organic compound (NMOC) emission rate using the procedures described in 40 CFR 60.754 (a)(3).

(b) Tier 1. The Permittee shall compare the calculated NMOC mass emission rate to the standard of 50 megagrams per year.

If the NMOC emission rate calculated in 40 CFR 60.754(a)(1) is less than 50 megagrams per year, then the landfill owner shall submit an emission rate report as provided in 40 CFR 60.757(b)(1), and shall recalculate the NMOC mass emission rate annually as required under 40 CFR 60.752(b)(1). If the calculated NMOC emission rate is equal to or greater than 50 megagrams per year, then the Permittee shall either comply with 40 CFR 60.752(b)(2), or determine a site-specific NMOC concentration and recalculate the NMOC emission rate using the procedures provided in 40 CFR 60.754(a)(3).

Tier 2. The Permittee shall determine the NMOC concentration using the following sampling procedure. The Permittee shall install at least two sample probes per hectare of landfill surface that has retained waste for at least 2 years. If the landfill is larger that 25 hectares in area, only 50 samples are required. The sample probes should be located to avoid known areas of nondegradable solid waste. The Permittee shall collect and analyze one sample of landfill gas from each probe to determine the NMOC concentration using Method 25C of appendix A of 40 CFR 60 or Method 18 of appendix A of 40 CFR 60. If using Method 18 of appendix A of 40 CFR 60, the minimum list of compounds to be tested shall be those published in the most recent Compilation of Air Pollutant Emission Factors (AP-42).

If composite sampling is used, equal volumes shall be taken from each sample probe. If more than the required number of samples are taken, all samples shall be used in analysis. The Permittee shall divide the NMOC concentration from Method 25C of appendix A by six to convert from C_{NMOC} as carbon to C_{NMOC} as hexane.

The Permittee shall recalculate the NMOC mass emission rate using the equations provided in 40 CFR 60.754(a)(1)(i) and (a)(1)(ii) and using the average NMOC concentration from the collected samples instead of the default value in the equation provided in 40 CFR 60.754(a)(1).

If the resulting mass emission rate calculated using the site-specific NMOC concentration is equal to or greater that 50 megagrams per year, then the Permittee shall either comply with 40 CFR 60.752(b)(2), or determine the site-specific methane generation rate constant and recalculate the NMOC emission rate using the site-specific methane generation rate using the procedure specified in 40 CFR 60.754(a)(4).

If the resulting NMOC mass emission rate is less than 50 megagrams per year, the Permittee shall submit a periodic estimate of the emission rate report as provided in 40 CFR 60.757(b)(1) and retest the site-specific NMOC concentration every five (5) years using the methods in 40 CFR 60.754(a)(3).

Tier 3. The site-specific methane generation rate constant shall be determined using the procedures provided in Method 2E of appendix A of 40 CFR 60. The Permittee shall estimate the NMOC mass emission rate using equations in 40 CFR 60.754(a)(1)(i) or (a)(1)(ii) and using a site-specific methane generation rate constant k, and the site-specific NMOC concentration as determined in 40 CFR 60.754(a)(3) instead of the default values provided in 40 CFR 60.754(a)(1). The Permittee shall compare the resulting NMOC mass emission rate to the standard of 50 megagrams per year.

If the NMOC mass emission rate as calculated using the site-specific methane generation rate and concentration of NMOC is equal to or greater than 50 megagrams per year, the Permittee shall comply with 40 CFR 60.752(b)(2).

If the NMOC mass emission rate is less than 50 megagrams per year, then the Permittee shall submit a periodic emission rate report as provided in 40 CFR 60.757(b)(1) and shall recalculate the NMOC mass emission rate annually, as provided in 40 CFR 60.757(b)(1) using the equations in 40 CFR 60.754(a)(1) and using the site-specific methane generation rate constant and NMOC concentration obtained in 40 CFR 60.754(a)(3). The calculation of the methane generation rate constant is performed only once, and the value obtained from this test shall be used in all subsequent annual NMOC emission rate calculations.

The Permittee may use other methods to determine the NMOC concentration or a site-specific k as an alternative to the methods required in 40 CFR 60.754(a)(3) and (a)(4) if the method has been approved by the Administrator as provided in 40 CFR 60.752(b)(2)(i)(B).

(c) The Permittee subject to 40 CFR 60.754 shall estimate the NMOC emission rate for comparison to the PSD major source and significance levels in 40 CFR 51.166 or 40 CFR 52.21 using AP-42 or other approved measurement procedures. If a collection system, which complies with the provisions of 40 CFR 60.752(b)(2) is already installed, the Permittee shall estimate the NMOC emission rate using the procedures provided in 40 CFR 60.754(b).

D.1.15 Reporting Requirements [40 CFR 60.757]

Pursuant to 40 CFR 60.757, except as provided in 40 CFR 60.752(b)(2)(i)(B), the Permittee shall:

(a) Submit an initial design capacity report to the Office of Air Quality (OAQ) no later than 90 days after October 8, 1997. An amended design capacity report shall be submitted to the Office of Air Quality (OAQ) providing notification of any increase in the design capacity of the landfill. The Permittee submitted the initial design report on June 17, 1996.

(b) Submit a non methane organic compound (NMOC) emission rate report to the Office of Air Quality initially and annually thereafter, except as provided for in 40 CFR 60.757(b)(1)(ii) or (b) (3). The Office of Air Quality (OAQ) may request such additional information as may be necessary to verify the reported NMOC emission rate. The report should contain an annual

or 5-year estimate of the non methane organic compound (NMOC) emission rate using the formula and procedures provided in 40 CFR 60.754 (a) or (b), as applicable. The initial NMOC emission rate report may be combined with the initial design capacity report required in 40 CFR 60.757(a) and shall be submitted no later than indicated in 40 CFR 60.757(b)(1)(i)(A) and (B). June 10, 1996 for landfills that commenced construction, modification, or reconstruction on or after May 30, 1991, but before March 12, 1996, or ninety days after the date of commenced construction, modification, or reconstruction for landfills that commenced construction, modification, or reconstruction on or after March 12, 1996. Subsequent NMOC emission rate reports shall be submitted annually thereafter, except as provided in 40 CFR 60.757(b)(1)(ii) and (b)(3). If the estimated NMOC emission rate as reported in the annual report to the Office of Air Quality (OAQ) is less than 50 megagrams per year in each of the next five (5) consecutive years, the Permittee may elect to submit an estimate of the NMOC emission rate for the next five (5) year period in lieu of the annual report. This estimate shall include the current amount of solid waste-in-place and the estimated waste acceptance rate for each year of the five (5) years for which an NMOC emission rate is estimated. All data and calculations upon which this estimate is based shall be provided to the Office of Air Quality (OAQ). This estimate shall be revised at least once every five (5) years. If the actual waste acceptance rate exceeds the estimated waste acceptance rate in any year reported in the five (5) year estimate, a revised five (5) year estimate shall be submitted to the Office of Air Quality. The revised estimate shall cover the five (5) year period beginning with the year in which the actual waste acceptance rate exceeded the estimated waste acceptance rate. The NMOC emission rate report shall include all the data, calculations, sample reports, and measurements used to estimate the annual or five (5) year emission rate. The Permittee is exempted from the requirements of 40 CFR 60.757(b)(1) and (2) after the installation of a collection and control system in compliance with 40 CFR 60.752 (b)(2), during such time as the system is in operation and in compliance with 40 CFR 60.753 and 60.755.

(c) Submit a collection and control system design plan to the Office of Air Quality (OAQ) within one (1) year of the first non methane organic compound (NMOC) emission rate report, required under 40 CFR 60.757(b), in which NMOC emission rate exceeds 50 megagrams (Mg) per year; except if the Permittee elects to recalculate the NMOC emission rate after Tier 2 sampling and analysis as provided in 40 CFR 60.754(a)(3) and the resulting rate is less than 50 megagrams per year, annual periodic reporting shall be resumed, using the Tier 2 determined site-specific NMOC concentration, until the calculated emission rate is equal to or greater than 50 megagrams per year or the landfill is closed.

The revised NMOC emission rate report, with the recalculated emission rate based on NMOC sampling and analysis, shall be submitted within 180 days of the first calculated exceedance of 50 megagrams per year. If the Permittee elects to recalculate the NMOC emission rate after determining a site-specific methane generation rate constant (k), as provided in Tier 3 in 40 CFR 60.754(a)(4), and the resulting NMOC emission rate is less than 50 megagrams per year, annual periodic reporting shall be resumed. The resulting site-specific methane generation rate constant (k) shall be used in the emission rate calculation until such time as the emissions rate calculation results in an exceedance. The revised NMOC emission rate report based on the provisions of 40 CFR 60.754(a)(4) and the resulting site-specific methane generation rate constant (k) shall be submitted to the Office of Air Quality (OAQ) within one (1) year of the first calculated emission rate exceeding 50 megagrams per year.

(d) Submit a closure report to the Office of Air Quality (OAQ) within thirty days of waste acceptance cessation. The Office of Air Quality (OAQ) may request additional information as may be necessary to verify that permanent closure has taken place in accordance with

the requirements of 40 CFR 258.60. If a closure report has been submitted to the Office of Air Quality (OAQ), no additional wastes may be placed into the landfill without filing a notification of modification as described under 40 CFR 60.7(a)(4).

(e) Submit an equipment removal report to the Office of Air Quality (OAQ) thirty (30) days prior to removal or cessation of operation of the control equipment. The equipment removal report shall contain all of the following items: a copy of the closure report submitted in accordance with 40 CFR 60.757(d), a copy of the initial performance test report demonstrating that the fifteen (15) year minimum control period has expired, and dated copies of three (3) successive NMOC emission rate reports demonstrating that the landfill is no longer producing 50 megagrams or greater of NMOC per year. The Office of Air Quality (OAQ) may request such additional information as may be necessary to verify that all of the conditions for removal in 40 CFR 60.752(b)(2)(v) have been met.

(f) Annual reports of the following recorded information. The initial annual report shall be submitted within 180 days of installation and start-up of the collection and control system, and shall include the initial performance test report required under 40 CFR 60.8. For enclosed combustion devices and flares, reportable exceedances are defined under 40 CFR 60.758(c).

(1) Value and length of time for exceedance of applicable parameters monitored under 40 CFR 60.756(a), (b), (c), and (d).

(2) Description and duration of all periods when the gas stream is diverted from the control device through a bypass line or the indication of bypass flow as specified under 40 CFR 60.756.

(3) Description and duration of all periods when the control device was not operating for a period exceeding one (1) hour and length of time the control device was not operating.

(4) All periods when the collection system was not operating in excess of five (5) days.

(5) Location of each exceedance of the 500 parts per million methane concentration as provided in 40 CFR 60.753(d) and the concentration recorded at each location for which an exceedance was recorded in the previous month.

(6) Date of installation and the location of each well or collection system expansion added pursuant to 40 CFR 60.755(a)(3), (b), and (c)(4).

(g) The Permittee seeking to comply with 40 CFR 40.752(b)(2)(iii) shall include the following information with the initial performance test report required under 40 CFR 60.8:

(1) A diagram of the collection system showing collection system positioning including all wells, horizontal collectors, surface collectors, or other gas extraction devices, including the locations of any areas excluded from collection and the proposed sites for the future collection system expansion.

(2) The data upon which the sufficient density of wells, horizontal collectors, surface collectors, or other gas extraction devices and the gas mover equipment sizing are based.

(3) The documentation of the presence of asbestos or nondegradable material for each area from which collection wells have been excluded based on the presence of asbestos or nondegradable material.

(4) The sum of the gas generation flow rates for all areas from which collection wells have been excluded based on nonproductivity and the calculations of gas generation flow rate for each excluded area.

(5) The provisions for increasing gas mover equipment capacity with increased gas generation flow rate, if the present gas mover equipment is inadequate to move the maximum flow rate expected over the life of the landfill

(6) The provisions for the control of off-site migration.

(h) A summary of the above information shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit.

D.1.16 Record Keeping Requirements [326 IAC 12] [40 CFR 60.758]

(a) Except as provided in 40 CFR 60.752(b)(2)(i)(B) the Permittee subject to 40 CFR 60.752(b) shall keep for at least five years up-to-date, readily accessible, continuous on-site records of the design capacity report which triggered 40 CFR 60.752(b), the current amount of solid waste in-place, and the year-by-year waste acceptance rate. Off-site records may be maintained if they are retrievable within four (4) hours. Either paper copy or electronic formats are acceptable.

(b) Except as provided in 40 CFR 60.752(b)(2)(i)(B) the Permittee of a controlled landfill shall keep up-to-date, readily accessible records for the life of the control equipment listed in (a) through (d) below as measured during the initial performance test or compliance determination. Records of subsequent tests or monitoring shall be maintained for a minimum of five (5) years. Records of control device vendor specifications shall be maintained until removal.

(1) Where the Permittee subject to the provisions of 40 CFR 60.758 seeks to demonstrate compliance with 40 CFR 60.752(b)(2)(ii):

(A) The maximum expected gas generation flow rate as calculated in 40 CFR 60.755(a)(1). The Permittee may use another method to determine the maximum gas generation flow rate, if the method has been approved by the Office of Air Quality (OAQ).

(B) The density of wells, horizontal collectors, surface collectors, or other gas extraction devices determined using the procedures specified in 40 CFR 60.759(a)(1).

(2) Where the Permittee subject to the provisions of 40 CFR 60.758 seeks to demonstrate compliance with 40 CFR 60.752(b)(2)(iii) through use of an enclosed combustion device other than a boiler or process heater with a design heat input capacity greater than 44 megawatts:

(A) The average combustion temperature measured at least every fifteen (15) minutes and averaged over the same time period of the performance test.

(B) The percent reduction of NMOC determined as specified in 40 CFR 60.752(b)(2)(iii)(B) achieved by the control device.

(3) Where the Permittee subject to the provisions of 40 CFR 60.758 seeks to demonstrate compliance with 40 CFR 60.752(b)(2)(iii)(B)(1) through use of a boiler or process heater of any size: a description of the location at which the collected gas vent stream is introduced into the boiler or process heater over the same time period of the performance testing.

(4) Where the Permittee subject to the provisions of 40 CFR 60.758 seeks to demonstrate compliance with 40 CFR 60.752(b)(2)(iii)(A) through use of an open flare, the flare type (i.e., steam-assisted, air -assisted, or nonassisted), all visible emission readings, heat content determination, flow rate or bypass flow rate measurements, and exit velocity determinations made during the performance test as specified in 40 CFR 60.18; continuous records of the flare pilot flame or flare flame monitoring and records of all periods of operations during which the pilot flame of the flare flame is absent.

(c) Except as provided in 40 CFR 60.752(b)(2)(i)(B) the Permittee of a controlled landfill subject to the provisions of this subpart shall keep for five years up-to-date, readily accessible, continuous on-site records of the equipment operating parameters specified to be monitored in 40 CFR 60.756 as well as up-to-date, readily accessible records for periods of operation during which the parameter boundaries established during the most recent performance test are exceeded.

(1) The following constitute exceedances that shall be recorded and reported under 40 CFR 60.757(f):

For enclosed combustors except for boilers and process heaters with design heat input capacity of 44 megawatts (150 million British thermal unit per hour) or greater, all 3-hour periods of operation during which the average combustion temperature was more than 28?C below the average combustion temperature during the most recent performance test at which compliance with 40 CFR 60.752(b)(2)(iii) was determined.

For boilers or process heaters, whenever there is a change in the location at which the vent stream is introduced into the flame zone as required under 40 CFR 60.758(b)(3)(i) of this section

(2) The Permittee subject to 40 CFR 60.758 shall keep up-to-date, readily accessible continuous records of the indication of flow to the control device or the indication of bypass flow or records of monthly inspections of car-seals or lock-and-key configurations used to seal bypass lines, specified under 40 CFR 60.756.

(3) The Permittee subject to the provisions of 40 CFR 60.758 who uses a boiler or process heater with a design heat input capacity of 44 megawatts or greater to comply with 40 CFR 60.752(b)(2)(iii) shall keep an up-to-date, readily accessible record of all periods of operation of the boiler or process heater. (Examples of such records could include records of steam use, fuel use, or monitoring data collected pursuant to other State, local, Tribal or Federal regulatory requirements.)

(4) The Permittee seeking to comply with the provisions of 40 CFR 60.758 by use of an open flare shall keep up-to-date, readily accessible continuous records of the flame or flare pilot flame monitoring specified under 40 CFR 60.756(c), and up-to-

date, readily accessible records of all periods of operation in which the flame or flare pilot flame is absent.

(d) Except as provided in 40 CFR 60.752(b)(2)(i)(B) the Permittee subject to the provisions of this subpart shall keep for the life of the collection system an up-to-date, readily accessible plot map showing each existing and planned collector in the system and providing a unique identification location label for each collector.

(1) The Permittee subject to the provisions of 40 CFR 60.758 shall keep up-to-date, readily accessible records of the installation date and location of all newly installed collectors as specified in 40 CFR 60.755 (b).

(2) The Permittee subject to the provisions of 40 CFR 60.758 shall keep readily accessible documentation of the nature, date of deposition, amount, and location of asbestos-containing or nondegradable waste excluded from collection as provided in 40 CFR 60.759 (a)(3)(i) as well as any non-productive areas excluded from collection as provided in 40 CFR 60.759 (a)(3)(ii).

(e) Except as provided in 40 CFR 60.752(b)(2)(i)(B) the Permittee subject to the provisions of this subpart shall keep for at least five years up-to-date, readily accessible records of all collection and control system exceedances of the operational standards in 40 CFR 60.753, the reading in the subsequent month whether or not the second reading is an exceedance, and the location of each exceedance.

(f) Permittees who convert design capacity from volume to mass or mass to volume to demonstrate that landfill design capacity is less than 2.5 million megagrams or 2.5 million cubic meters, as provided in the definition of “design capacity”, shall keep readily accessible, on-site records of the annual recalculation of site-specific density, design capacity, and the supporting documentation. Off-site records may be maintained if they are retrievable within 4 hours. Either paper copy or electronic formats are acceptable.

D.1.17 Recordkeeping for NESHAP for Asbestos Active Waste Disposal Sites [40 CFR 61.154]

(a) For all asbestos containing waste material received, the owner or operator of the active waste disposal site shall:

(1) Maintain waste shipment records, using a form similar to that shown in figure 4 of 40 CFR 61, Subpart M, and include the following information

(A) The name, address, and telephone number of the waste generator;

(B) The name, address, and telephone number of the transporter(s);

(C) The quantity of the asbestos containing waste material in cubic meters (cubic yards).

(D) The presence of improperly enclosed or uncovered waste, or any asbestos-containing waste material not sealed in leak-tight containers. Report in writing to the local, State, or EPA Regional office responsible for administering the asbestos NESHAP program for the waste generator (identified in the waste shipment record), and if different, the local, State, or EPA Regional office responsible for administering the asbestos NESHAP program for the disposal site, by the following working day, the presence of a significant amount of improperly enclosed or uncovered waste. Submit a copy of the waste shipment record along with the report.

(E) The date of the receipt.

(2) As soon as possible and no longer than 30 days after receipt of the waste, send a copy of the signed waste shipment record to the waste generator.

(3) Upon discovering a discrepancy between the quantity of waste designated on the waste shipment records and the quantity actually received, attempt to reconcile the discrepancy with the waste generator. If the discrepancy is not resolved within 15 days after receiving the waste, immediately report in writing to the local, State, or EPA Regional office responsible for administering the asbestos NESHAP program for the waste generator (identified in the waste shipment record), and if different, the local, State, or EPA Regional office responsible for administering the asbestos NESHAP program for the disposal site. Describe the discrepancy and attempts to reconcile it, and submit a copy of the waste shipment record along with the report.

(4) Retain a copy of all records and reports required by this paragraph for at least 2 years.

(b) Maintain until closure, records of the location, depth and area, and quantity in cubic meters (cubic yards) of asbestos-containing waste material within the disposal site on a map or diagram of the disposal area.

(c) Upon closure, comply with all the provisions of 40 CFR 61.151.

(d) Submit to the Administrator, upon closure of the facility, a copy of records of asbestos waste disposal locations and quantities.

(e) Furnish upon request, and make available during normal business hours for inspection by the Administrator, all records required under this section.

(f) Notify the Administrator in writing at least 45 days prior to excavating or otherwise disturbing any asbestos-containing waste material that has been deposited at a waste disposal site and is covered. If the excavation will begin on a date other than the one contained in the original notice, notice of the new start date must be provided to the Administrator at least 10 working days before excavation begins and in no event shall excavation begin earlier than the date specified in the original notification. Include the following information in the notice:

(1) Scheduled starting and completion dates.

(2) Reason for disturbing the waste.

(3) Procedures to be used to control emissions during the excavation, storage, transport, and ultimate disposal of the excavated asbestos-containing waste material. If deemed necessary, the Administrator may require changes in the emission control procedures to be used.

(4) Location of any temporary storage site and the final disposal site.

D.1.18 Record Keeping and Reporting Requirements for NESHAP for Municipal Solid Waste Landfills [40 CFR 63.1980]

Pursuant to 40 CFR 63.1980, the Permittee shall:

(a) Keep records and reports as specified in 40 CFR 60, Subpart WWW, or in the Federal plan, EPA approved State plan or tribal plan that implements 40 CFR 60, Subpart Cc, whichever applies to this landfill, with one exception: The Permittee must submit the annual report described in 40 CFR 60.757(f) and Condition D.1.13(f) every 6 months.

(b) Keep records and reports as specified in the general provisions of 40 CFR 60 and 40 CFR 63 as shown in Table 1 of 40 CFR 63, Subpart AAAA. Applicable records in the general provisions include items such as SSM plans and the SSM plan reports. The SSM Plan report is due semi-annually.

D.1.19 Record Keeping Requirements

(a) To document compliance with Condition D.1.9, the Permittee shall maintain records of the VOC and HAP contents of the waste water received.

(b) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

Indiana Department of Environmental Management
Office of Air Quality

Technical Support Document (TSD) for a Part 70 Minor Source Modification and a Part 70 Significant Permit Modification

Source Background and Description

Source Name:	Liberty Landfill, Inc.
Source Location:	8635 East State Road 16, Monticello, Indiana 47960
County:	White
SIC Code:	4953
Operation Permit No.:	T181-7338-00035
Operation Permit Issuance Date:	July 26, 1999
Minor Source Modification No.:	181-18276-00035
Significant Permit Modification No.:	181-18503-00035
Permit Reviewer:	ERG/YC

The Office of Air Quality (OAQ) has reviewed a modification application from Liberty Landfill, Inc. relating to the modification of the following emission unit:

(a) One (1) Leachate Evaporation System, identified as E-Vap, constructed in 1998 and modified in 2004, with a maximum capacity of 10,000 gallons per day, controlled by an integral enclosed flare FL1. The evaporator has a maximum heat input rate of 6.6 MMBtu/hr, using landfill gas as fuel. This system is used to process the leachate generated from this landfill and dilute industrial wastewater received from other plants.

In addition, the source proposed to construct and operate the following insignificant units:

(a) Four (4) wastewater storage tanks, constructed in 2004, each with a maximum capacity of 8,000 gallons.

(b) One (1) wastewater storage tank, constructed in 2004, with a maximum capacity of 10,000 gallons.

History

Liberty Landfill, Inc. is an existing municipal solid waste landfill with NMOC emissions greater than 50 Mg/yr. A Part 70 permit (T181-7338-00035) was issued to this source on July 26, 1999. On December 1, 2003, the source submitted an application to the OAQ requesting the following modifications:

(a) Giroux Energy, Inc. will take over ownership of the existing leachate evaporation process and the landfill gas (LFG) generated from this landfill site.

(b) The existing leachate evaporation process was identified as “LES” in the source’s Part 70 permit. The source requested to redesignate this unit as “E-Vap”.

(c) The source requested that dilute industrial wastewater received from other plants be processed in the existing leachate evaporation system (E-Vap). Additional wastewater tanks will also be added to this source.

The E-Vap unit is currently used to process the leachate generated from this landfill site and is controlled by an existing 2,500 scfm flare (FL1). The maximum heat input to the E-Vap is 6.6 MMBtu/hr and the fuel used is the landfill gas generated from this site. The changes above include physical changes and the changes in operating methods to the E-Vap. Therefore, this project is considered a modification to the E-Vap. The source also stated that the 1,500 scfm open flare has been removed from this source.

Source Definition

This municipal solid waste landfill consists of a source with an on-site contractor:

(a) Liberty Landfill, Inc., the primary operation, owns and operates a municipal solid waste landfill, located at 8653 East State Road 16, Monticello, Indiana 47960 (SIC: 4953); and

(b) Giroux Energy, Inc., an on-site contractor, purchases and utilizes the landfill gas generated from Liberty Landfill, Inc.

IDEM has determined that Liberty Landfill, Inc. and Giroux Energy, Inc. are considered one source due to contractural control. Therefore, the term “source” in the Part 70 documents refers to both Liberty Landfill, Inc. and Giroux Energy, Inc. as one source.

Air Pollution Control Justification as an Integral Part of the Process

The company has submitted the following justification requesting that the existing enclosed 2,500 scfm flare be considered as an integral part of the modified leachate evaporation process (E-Vap).

(a) A programmable logic controller (PLC) continuously monitors and controls the operating conditions for the E-Vap. When the 2,500 scfm enclosed flare shuts down for any reason, the PLC shutdown the E-Vap immediately. Therefore, the E-Vap cannot operate when the enclosed flare is not in operation.

(b) The 2,500 scfm enclosed flare is considered a thermal oxidation zone for the E-Vap process and is part of the original E-Vap system design. It is necessary to operate the 2,500 scfm enclosed flare to control the VOC and HAP emissions from the E-Vap for environmental and safety purposes.

IDEM, OAQ has evaluated the justifications and agreed that the enclosed 2,500 scfm flare will be considered an integral part of the E-Vap. Therefore, the permitting level for the E-Vap will be determined using the potential to emit after the enclosed flare control. Operating conditions in the proposed permit will specify that this enclosed flare shall operate at all times when the E-Vap is in operation.

Enforcement Issue

There are no enforcement actions pending.

Stack Summary

Stack ID	Operation	Height (feet)	Diameter (feet)	Flow Rate (acfm)	Temperature (^{0}F)
S-2	2,500 scfm enclosed flare	47	9.63	2,500	1,400-1,800

Recommendation

The staff recommends to the Commissioner that the Part 70 Minor Source Modification and the Part 70 Significant Permit Modification be approved. This recommendation is based on the following facts and conditions:

Unless otherwise stated, information used in this review was derived from the application and additional information submitted by the applicant.

An application for the purposes of this review was received on December 1, 2003. Additional information was received on January 13, 2004 and February 13, 2004.

Emission Calculations

See Appendix A of this document for detailed emissions calculations (pages 1 and 2).

Potential To Emit of Modification

Pursuant to 326 IAC 2-1.1-1(16), Potential to Emit is defined as "the maximum capacity of a stationary source to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or type or amount of material combusted, stored, or processed shall be treated as part of its design if the limitation is enforceable by the U. S. EPA."

This table reflects the PTE before controls. Control equipment is not considered federally enforceable until it has been required in a federally enforceable permit.

Pollutant	*Potential To Emit (tons/year)
PM	0.45
PM-10	0.45
SO_2	0.46
VOC	11.2
CO	19.7
NO_x	1.05

**HAP's	Potential To Emit (tons/year)
A single HAP	Less than 10.0
TOTAL	11.0

Note: (*) There are no physical changes to the existing 2,500 scfm flare or changes in operating methods for the existing 2,500 scfm enclosed flare. Therefore, the PTE of the modification does not include the PTE of the existing 2,500 scfm enclosed flare.

(**) The wastewater received contains only organic HAPs and the HAP content for each single HAP varies greatly.

Justification for Modification

This modification is being performed through a Part 70 Minor Source Modification because :

(a) The potential to emit VOC is greater than 10 tons/yr and less than 25 tons /yr, pursuant to 326 IAC 2-7-10.5(d)(4)(B); and

(b) This is a modification subject to a NSPS and a NESHAP, and the NSPS and the NESHAP are the most stringent applicable requirements for this modification, pursuant to 326 IAC 2-7-10.5(d)(6).

The permit modification is being performed through a Part 70 Significant Permit Modification pursuant to 326 IAC 2-7-12(d) because this is a modification under a provision of Title I of CAA.

County Attainment Status

The source is located in White County.

Pollutant	Status
PM-10	Attainment
SO_2	Attainment
NO_2	Attainment
Ozone	Attainment
CO	Attainment
Lead	Attainment

(a) Volatile organic compounds (VOC) are precursors for the formation of ozone. Therefore, VOC emissions are considered when evaluating the rule applicability relating to the ozone standards. White County has been designated as attainment or unclassifiable for ozone. Therefore, VOC emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.

(b) White County has been classified as attainment or unclassifiable for all other criteria pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.

(c) Fugitive Emissions
Since this type of operation is not in one of the 28 listed source categories under 326 IAC 2-2 and since there are no applicable New Source Performance Standards that were in effect on August 7, 1980, the fugitive PM emissions are not counted toward determination of PSD and Emission Offset applicability.

Source Status

Existing Source PSD Definition (emissions after controls, based upon 8760 hours of operation per year at rated capacity and/or as otherwise limited):

Pollutant	Emissions (tons/year)
PM	4.69
PM-10	4.69
SO_2	5.76
VOC	23.4
CO	67.5

NOx	20.3

(a) This existing source is not a major stationary source because no attainment regulated pollutant is emitted at a rate of 250 tons per year or more, and it is not in one of the 28 listed source categories.

(b) These emissions are based upon the potential to emit (PTE) from the entire source in the Technical Support Document (TSD) for the source's Part 70 Permit (T181-7338-00035, issued July 26, 1999). The PTE of VOC is calculated based on 75% capture efficiency and 98% control efficiency.

Potential to Emit of Modification After Issuance

The table below summarizes the potential to emit, reflecting all limits, of the significant emission units after controls. The control equipment is considered federally enforceable only after issuance of this Part 70 source modification.

	Potential to Emit (tons/year)						
Process/facility	PM	PM-10	SO_2	VOC	CO	NO_X	HAPs
Leachate Evaporation System (E-Vap) - from wastewater	-	-	-	Less than 24.5	-	-	See note
Leachate Evaporation System (E-Vap) - from heating	0.45	0.45	0.46	0.15	19.7	1.05	Negligible
Total PTE of This Modification	0.45	0.45	0.46	Less than 24.7	19.7	1.05	See note
PSD Significant Thresholds	250	250	250	250	250	250	NA

Note: Less than 9.64 for a single HAP and less than 24.5 for total HAPs.

Federal Rule Applicability

(a) Each of the proposed wastewater storage tanks has a maximum capacity less than 75 cubic meters (19,813 gallons). Therefore, the New Source Performance Standards for Volatile Organic Liquid Storage Vessels for which construction, reconstruction, or modification commenced after July 23, 1984 (326 IAC 12, 40 CFR 60.110b - 117b, Subpart Kb) are not applicable to these tanks.

(b) The existing municipal sold waste landfill is subject to the requirements of the New Source Performance Standard for Municipal Solid Waste Landfills (326 IAC 12 and 40 CFR 60.750-759, Subpart WWW) because this landfill site commenced modification and accepting waste after May 30, 1991. The requirements of 40 CFR 60, Subpart WWW previously applied to this landfill and are contained in the source's Title V permit #181-7338-00035, issued on July 26, 1999.

The NMOC emissions from this source have exceeded 50 Mg/yr. Therefore, this source is now subject to the collection and control system requirements in 40 CFR 60.752(b)(2). This landfill is currently controlled by one (1) 2,500 scfm enclosed flare. The source proposed to use the existing 2,500 scfm enclosed flare to control the VOC and HAP

emissions from the leachate evaporation system (E-Vap) when processing industrial wastewater.

An enclosed flare is considered an enclosed combustor. Pursuant to 40 CFR 60.756(b), a source using an enclosed combustor shall install, calibrate, maintain, and operate according to the manufacturer's specifications the following equipment:

(1) A temperature monitoring device equipped with a continuous recorder and having a minimum accuracy of ±1 percent of the temperature being measured expressed in degrees Celsius of ±0.5 ?C, whichever is greater. A temperature monitoring device is not required for boilers or process heaters with design heat input capacity greater than 44 megawatts.

(2) A device that records flow to or bypass of the control device. The Permittee shall either; install, calibrate, and maintain a gas flow rate measuring device that shall record the flow to the control device at least every fifteen (15) minutes; or secure the bypass line valve in the closed position with a car-seal or a lock-and-key type configuration.

A visual inspection of the seal or closure mechanism shall be performed at least once every month to ensure that the valve is maintained in the closed position and that the gas flow is not diverted through the bypass line.

(c) This landfill receives asbestos-containing material. Therefore, this source is subject to the National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Asbestos Active Waste Disposal Site (326 IAC 14 and 40 CFR 61, Subpart M). The requirements of 40 CFR 61, Subpart M previously applied to this landfill and are contained in the source's Title V permit (T181-7338-00035, issued on July 26, 1999).

(d) This source has accepted waste since November 8, 1987, has a design capacity greater than 2.5 million megagrams, and has uncontrolled NMOC emissions greater than 50 megagrams per year (Mg/yr). Therefore, the source is subject to the requirements of National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Municipal Solid Waste Landfills (40 CFR 63.1930 - 63.1952, Subpart AAAA). This landfill site does not include a bioreactor, as defined in 40 CFR 63.1990.

Since this NESHAP was promulgated on January 16, 2003 and was not included in the source's Title V permit (T181-7338-00035, issued July 26, 1999), the conditions for the requirement of 40 CFR 63, Subpart AAAA will be added into this source modification and permit modification. The additional conditions are listed as the following:

(1) Pursuant to 40 CFR 63.1955, the Permittee shall:

(A) Comply with the requirements of 40 CFR 60, Subpart WWW.

(B) If the source is required by 40 CFR 60.752(b)(2) to install a collection and control system, the source shall comply with the general and continuing compliance requirements in 40 CFR 63.1960 through 40 CFR 63.1985.

(C) For approval of collection and control systems that include any alternatives to the operational standards, test methods, procedures, compliance measures, monitoring, recordkeeping or reporting provisions, the Permittee must follow the procedures in 40 CFR 60.752(b)(2). If alternatives have already been approved under 40 CFR part 60 subpart

WWW or the Federal plan, or EPA approved and effective State or tribal plan, these alternatives can be used to comply with this subpart, except that all affected sources must comply with the startup, shutdown, and malfunction (SSM) requirements in Subpart A of this part as specified in Table 1 of this subpart and all affected sources must submit compliance reports every 6 months as specified in 40 CFR 63.1980(a) and (b), including information on all deviations that occurred during the 6-month reporting period. Deviations (as defined in 40 CFR 63.1965) for continuous emission monitors or numerical continuous parameter monitors must be determined using a 3 hour monitoring block average (as defined in 40 CFR 63.1975).

(2) Pursuant to 40 CFR 63.1960, compliance with 40 CFR 63, Subpart AAAA is determined by the following:

(A) The same way it is determined for 40 CFR 60, Subpart WWW, including performance testing, monitoring of the collection system, continuous parameter monitoring, and other credible evidence.

(B) Continuous parameter monitoring data, collected under 40 CFR 60.756(b)(1), (c)(1), and (d) of subpart WWW, are used to demonstrate compliance with the operating conditions for control systems. If a deviation (as defined in 40 CFR 63.1965) occurs, the Permitee has failed to meet the control device operating conditions described in 40 CFR 60, Subpart WWW and has deviated from the requirements of this subpart.

(C) The Permittee must develop and implement a written SSM plan according to the provisions in 40 CFR 63.6(e)(3). A copy of the SSM plan must be maintained on site. Failure to write, implement, or maintain a copy of the SSM plan is a deviation from the requirements of this subpart.

(3) Pursuant to 40 CFR 63.1980, the Permittee has the following record keeping and reporting requirements:

(A) The Permittee shall keep records and reports as specified in 40 CFR 60, Subpart WWW, or in the Federal plan, EPA approved State plan or tribal plan that implements 40 CFR 60, Subpart Cc, whichever applies to this landfill, with one exception: The Permittee must submit the annual report described in 40 CFR 60.757(f) every 6 months.

(B) The Permittee shall keep records and reports as specified in the general provisions of 40 CFR part 60 and 40 CFR 63 as shown in Table 1 of 40 CFR 63, Subpart AAAA. Applicable records in the general provisions include items such as SSM plans and the SSM plan reports.

(e) The source is not a HAP major source after this modification and does not receive off-site hazardous waste materials as defined in 63.680(b). Therefore, the requirements of the National Emission Standards for Hazardous Pollutants for Off-Site Waste and Recovery Operations (326 IAC 20-23, 40 CFR Part 63.680-698, Subpart DD) are not applicable to this modification.

(f) This modification does not involve a pollutant-specific emissions unit as defined in 40 CFR 64.1:

(1) With the potential to emit before controls equal to or greater than the major source threshold;

(2) That is subject to an emission limitation or standard; and

(3) Uses a control device (the enclosed flare) as defined in 40 CFR 64.1 to comply with that emission limitation or standard.

Therefore, the requirements of 40 CFR 64 (Compliance Assurance Monitoring) are not applicable to this modification.

State Rule Applicability - Leachate Evaporation System (E-Vap)

326 IAC 2-7-10.5 (Part 70 Source Modification)

Pursuant to 2-7-10.5(d) (Part 70 Minor Source Modification),

(a) The VOC content of the received waste water is less than 0.56 lbs/gal. Based on the maximum evaporation rate of 12,000 gal/day and 98% control efficiency, this is equivalent to 24.5 ton tons/yr of VOC emissions. Therefore, the requirements of 326 IAC 8-1-6 (BACT) and 326 IAC 2-7-10.5(f) (Part 70 Significant Source Modification) are not applicable. Any change or modification which may increase the VOC content of the received waste water to greater than 0.56 lbs/gal must be approved by IDEM, OAQ before any such change may occur.

(b) The HAP content for a single HAP of the received waste water is less than 0.22 lbs/gal. Based on the maximum evaporation rate of 12,000 gal/day and 98% control efficiency, this is equivalent to 9.64 ton tons/yr of HAP emissions. Therefore, the requirements of 326 IAC 2-4.1 (MACT) and 326 IAC 2-7-10.5(f) (Part 70 Significant Source Modification) are not applicable. Any change or modification which may increase the HAP content for a single HAP of the received waste water to greater than 0.22 lbs/gal must be approved by IDEM, OAQ before any such change may occur.

(c) The total HAP content of the received waste water is less than 0.56 lbs/gal. Based on the maximum evaporation rate of 12,000 gal/day and 98% control efficiency, this is equivalent to 24.5 ton tons/yr of HAP emissions. Therefore, the requirements of 326 IAC 2-4.1 (MACT) and 326 IAC 2-7-10.5(f) (Part 70 Significant Source Modification) are not applicable. Any change or modification which may increase the total HAP content of the received waste water to greater than 0.56 lbs/gal must be approved by IDEM, OAQ before any such change may occur.

Therefore, the requirements of 326 IAC 2-7-10.5(f) (Part 70 Significant Source Modification) are not applicable.

326 IAC 2-4.1 (New Sources of Hazardous Air Pollutants)

The potential to emit HAPs from this modification after control is less than 10 tons/yr for a single HAP and less than 25 tons/yr for any combination of HAPs. Therefore, the requirements of 326 IAC 2-4.1(MACT) are not applicable to this modification.

326 IAC 8-1-6 (General Reduction Requirements for VOC Emissions)

The potential VOC emissions from the leachate evaporation system (E-Vap) are less than 25 tons per year. Therefore, the requirements of 326 IAC 8-1-6(BACT) are not applicable to the E-Vap.

State Rule Applicability - Wastewater Storage Tanks (Insignificant)

326 IAC 8-9 (Volatile Organic Liquid Storage Vessels)

This source is not located in Clark, Floyd, Lake, or Porter County. Therefore, the requirements of 326 IAC 8-9 are not applicable to these tanks. Since there are no specifically applicable requirements for these tanks, these tanks are documented in this TSD only and will not be included in the source's Part 70 permit.

Compliance Requirements

Permits issued under 326 IAC 2-7 are required to ensure that sources can demonstrate compliance with applicable state and federal rules on a more or less continuous basis. All state and federal rules contain compliance provisions, however, these provisions do not always fulfill the requirement for a more or less continuous demonstration. When this occurs IDEM, OAQ, in conjunction with the source, must develop specific conditions to satisfy 326 IAC 2-7-5. As a result, compliance requirements are divided into two sections: Compliance Determination Requirements and Compliance Monitoring Requirements.

Compliance Determination Requirements in Section D of the permit are those conditions that are found more or less directly within state and federal rules and the violation of which serves as grounds for enforcement action. If these conditions are not sufficient to demonstrate continuous compliance, they will be supplemented with Compliance Monitoring Requirements, also Section D of the permit. Unlike Compliance Determination Requirements, failure to meet Compliance Monitoring conditions would serve as a trigger for corrective actions and not grounds for enforcement action. However, a violation in relation to a compliance monitoring condition will arise through a source's failure to take the appropriate corrective actions within a specific time period.

The compliance monitoring requirements applicable to this modification are as below:

1. The existing 2,500 enclosed flare is subject to the New Source Performance Standard for Municipal Solid Waste Landfills (40 CFR 60.750-759, Subpart WWW). Pursuant to 40 CFR 60.756(b), the source using an enclosed combustor shall install, calibrate, maintain, and operate according to the manufacturer's specifications the following equipment, except as otherwise provided in approved variances contained within the Collection and Control System Design Plan:

    (a) A temperature monitoring device equipped with a continuous recorder and having a minimum accuracy of ±1 percent of the temperature being measured expressed in degrees Celsius of ±0.5 ?C, whichever is greater. A temperature monitoring device is not required for boilers or process heaters with design heat input capacity greater than 44 megawatts.

    (b) A device that records flow to or bypass of the control device. The Permittee shall either; install, calibrate, and maintain a gas flow rate measuring device that shall record the flow to the control device at least every fifteen (15) minutes; or secure the bypass line valve in the closed position with a car-seal or a lock-and-key type configuration.

    A visual inspection of the seal or closure mechanism shall be performed at least once every month to ensure that the valve is maintained in the closed position and that the gas flow is not diverted through the bypass line.

    This monitoring conditions are necessary to ensure compliance with 40 CFR 60, Subpart WWW and 40 CFR 63, Subpart AAAA.

Proposed Changes

Bold language has been added, language with a line through it has been deleted.

SECTION A SOURCE SUMMARY

This permit is based on information requested by the Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ). The information describing the source contained in conditions A.1**,** ~~through~~ A.3**, and A.4** is descriptive information and does not constitute enforceable conditions. However, the Permittee should be aware that a physical change or a change in the method of operation that may render this descriptive information obsolete or inaccurate may trigger requirements for the Permittee to obtain additional permits or seek modification of this permit pursuant to 326 IAC 2, or change other applicable requirements presented in the permit application.

A.1 General Information [326 IAC 2-7-4(c)] [326 IAC 2-7-5(15)]

The Permittee owns and operates a stationary municipal solid waste landfill (MSLWLF)

Responsible Official:	~~Tom Wilson~~ **Director of Operations**
Source Address:	8635 E. State Road 16, Monticello, IN 47960
Mailing Address:	8635 E. State Road 16, Monticello, IN 47960
SIC Code:	4953
County Location:	White
Source Location ~~County~~ Status:	Attainment for all criteria pollutants
Source Status:	Part 70 Permit Program Minor Source under PSD Rules Minor Source, Section 112 of the Clean Air Act **Not 1 of 28 Source Categories**

A.2 Part 70 Source Definition [326 IAC 2-7-1(22)]

This landfill site consists of a source with an on-site contractor:

(a) Liberty Landfill, Inc., the primary operation, owns and operates a municipal solid waste landfill, located at 8653 East State Road 16, Monticello, Indiana 47960 (SIC: 4953); and

(b) Giroux Energy, Inc., an on-site contractor, purchases and utilizes the landfill gas generated from Liberty Landfill, Inc.

IDEM has determined that Liberty Landfill, Inc. and Giroux Energy, Inc. are considered one source due to contractural control. Therefore, the term "source" in the Part 70 documents refers to both Liberty Landfill, Inc. and Giroux Energy, Inc. as one source.

A.~~2~~**3** Emission Units and Pollution Control Equipment Summary [326 IAC 2-7-4(c)(3)] [326 IAC 2-7-5(15)]

This stationary source consists of the following emission units:

(a) One (1) solid waste disposal facility having the meaning described in 40 CFR 60.751 pertaining to all contiguous land and structures, other appurtenances (including haul roads), and improvements on the land used for disposal of solid waste and has a design capacity of 10,140,000 Megagrams.

(b) One (1) gas collection system (GCS) designed and having a capacity in accordance with the applicable provisions of 40 CFR 60, Subpart WWW and having emissions controlled by~~: one (1) flare with a capacity of 1500 cfm identified as S-1, installed in 1996, and by~~ those control devices as listed in A.2(c) and A.2(d).

(c) One (1) enclosed ground flare**, identified as FL1,** installed in 1998**,** with a combustion capacity of 2,500 cubic feet per minute of landfill gas (LFG) per hour.

(d) One (1) Leachate Evaporation System**,** ~~(LES)~~ **identified as E-Vap,** installed in 1998 **and modified in 2004,** with a ~~capacity~~ **maximum evaporation rate** of ~~10,000~~ **12,000** gallons ~~of leachate~~ per day**, controlled by an integral enclosed flare FL1. The evaporator has a maximum heat input rate of 6.6 MMBtu/hr, using landfill gas as fuel. This system is used to process the leachate generated from this landfill and dilute industrial wastewater received from other plants.**

A.~~3~~**4** Specifically Regulated Insignificant Activities [326 IAC 2-7-1(21)] [326 IAC 2-7-4(c)] [326 IAC 2-7-5(15)]

A.~~4~~**5** Part 70 Permit Applicability [326 IAC 2-7-2]

SECTION D.1 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]

(a) One (1) solid waste disposal facility having the meaning described in 40 CFR 60.751 pertaining to all contiguous land and structures, other appurtenances (including haul roads), and improvements on the land used for disposal of solid waste and has a design capacity of 10,140,000 Megagrams.

(b) One (1) gas collection system (GCS) designed and having a capacity in accordance with the applicable provisions of 40 CFR 60, Subpart WWW and having emissions controlled by~~: one (1) flare with a capacity of 1500 cfm identified as S-1, installed in 1996, and by~~ those control devices as listed in A.2(c) and A.2(d).

(c) One (1) enclosed ground flare**, identified as FL1,** installed in 1998**,** with a combustion capacity of 2,500 cubic feet per minute of landfill gas (LFG) per hour.

(d) One (1) Leachate Evaporation System**,** ~~(LES)~~ **identified as E-Vap,** installed in 1998 **and modified in 2004,** with a ~~capacity~~ **maximum evaporation rate** of ~~10,000~~ **12,000** gallons ~~of leachate~~ per day**, controlled by an integral enclosed flare FL1. The evaporator has a maximum heat input rate of 6.6 MMBtu/hr, using landfill gas as fuel. This system is used to process the leachate generated from this landfill and dilute industrial wastewater received from other plants.**

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

D.1.1 General Provisions Relating to NSPS **and NESHAP** [326 IAC 12-1][40 CFR Part 60, Subpart A] and to HAPs [326 IAC 14-1-1][40 CFR Part 61, Subpart A] **[326 IAC 20-1] [40 CFR 63, Subpart AAAA]**

. . . .

(c) The provisions of 40 CFR Part 63, Subpart A - General Provisions, which are incorporated by reference in 326 IAC 20-1-1, apply to the facility described in this section except when otherwise specified in 40 CFR Part 63, Subpart AAAA, or as specified by approved variances contained within the Collection and Control Design Plan.

D.1.3 Municipal Solid Waste Landfill NSPS [326 IAC 12] [40 CFR 60.752, Subpart WWW]

The municipal solid waste landfill has a design capacity greater than 2.5 million megagrams (Mg) and shall ~~either~~ comply with 40 CFR 60.752. ~~(b)(2) or calculate the non methane organic compound (NMOC) emission rate for the landfill using the procedures specified in 40 CFR 60.754.~~

D.1.4 Municipal Solid Waste Landfill NESHAP [40 CFR 63, Subpart AAAA]

The municipal solid waste landfill has a design capacity greater than 2.5 million megagrams (Mg) and has estimated uncontrolled NMOC emissions greater than 50 Mg/yr. Therefore, this landfill shall comply with 40 CFR 63, Subpart AAAA.

D.1.~~4~~**5** Operational Standards for Collection and Control Systems [40 CFR 60.753]

D.1.~~5~~**6** Particulate Matter (PM) [326 IAC 6-3-2(c)]

D.1.~~6~~**7** NESHAP for Asbestos Active Waste Disposal Sites [40 CFR 61.154]

D.1.8 Municipal Solid Waste Landfill NESHAP [326 IAC 20] [40 CFR 63, Subpart AAAA]

Pursuant to 40 CFR 63.1955, the Permittee shall:

(a) Comply with the requirements of 40 CFR 60, Subpart WWW.

(b) If the Permitee is required by 40 CFR 60.752(b)(2) to install a collection and control system, the Permittee shall comply with the general and continuing compliance requirements in 40 CFR 63.1960 through 40 CFR 63.1985.

(c) For approval of collection and control systems that include any alternatives to the operational standards, test methods, procedures, compliance measures, monitoring, recordkeeping or reporting provisions, the Permittee must follow the procedures in 40 CFR 60.752(b)(2). If alternatives have already been approved under 40 CFR part 60 subpart WWW or the Federal plan, or EPA approved and effective State or tribal plan, these alternatives can be used to comply with this subpart, except that all affected sources must comply with the startup, shutdown, and malfunction (SSM) requirements in Subpart A of this part as specified in Table 1 of this subpart and all affected sources must submit compliance reports every 6 months as specified in 40 CFR 63.1980(a) and (b), including information on all deviations that occurred during the 6-month reporting period. Deviations (as defined in 40 CFR 63.1965) for continuous emission monitors or numerical continuous parameter monitors must be determined using a 3 hour monitoring block average (as defined in 40 CFR 63.1975).

D.1.9 Minor Source Modification Limits [326 IAC 2-7-10.5][326 IAC 8-1-6]

(a) The VOC content of the received waste water is less than 0.56 lbs/gal. Based on the maximum evaporation rate of 12,000 gal/day and 98% control efficiency, this is equivalent to 24.5 ton tons/yr of VOC emissions. Therefore, the requirements of 326 IAC 8-1-6 (BACT) and 326 IAC 2-7-10.5(f) (Part 70 Significant Source Modification) are not applicable. Any change or modification which may increase the VOC content of the received waste water to greater than 0.56 lbs/gal must be approved by IDEM, OAQ before any such change may occur.

(b) The HAP content for a single HAP of the received waste water is less than 0.22 lbs/gal. Based on the maximum evaporation rate of 12,000 gal/day and 98% control efficiency, this is equivalent to 9.64 ton tons/yr of HAP emissions. Therefore, the requirements of 326 IAC 2-4.1 (MACT) and 326 IAC 2-7-10.5(f) (Part 70 Significant Source Modification) are not applicable. Any change or modification which may increase the HAP content for a single HAP of the received waste water to greater than 0.22 lbs/gal must be approved by IDEM, OAQ before any such change may occur.

(c) The total HAP content of the received waste water is less than 0.56 lbs/gal. Based on the maximum evaporation rate of 12,000 gal/day and 98% control efficiency, this is equivalent to 24.5 ton tons/yr of HAP emissions. Therefore, the requirements of 326 IAC 2-4.1 (MACT) and 326 IAC 2-7-10.5(f) (Part 70 Significant Source Modification) are not applicable. Any change or modification which may increase the total HAP content of the received waste water to greater than 0.56 lbs/gal must be approved by IDEM, OAQ before any such change may occur.

D.1.~~7~~**10** Testing Requirements [326 IAC 2-7-6(1),(6)] [40 CFR 60.754(b)]

D.1.11 Compliance Determination [40 CFR 63.1960]

Pursuant to 40 CFR 63.1960, compliance with 40 CFR 63, Subpart AAAA is determined by the following:

(a) The same way it is determined for 40 CFR 60, Subpart WWW, including performance testing, monitoring of the collection system, continuous parameter monitoring, and other credible evidence.

(b) Continuous parameter monitoring data, collected under 40 CFR 60.756(b)(1), (c)(1), and (d) of subpart WWW, are used to demonstrate compliance with the operating conditions for control systems. If a deviation (as defined in 40 CFR 63.1965) occurs, the Permitee has failed to meet the control device operating conditions described in 40 CFR 60, Subpart WWW and has deviated from the requirements of this subpart.

(c) The Permittee must develop and implement a written SSM plan according to the provisions in 40 CFR 63.6(e)(3). A copy of the SSM plan must be maintained on site. Failure to write, implement, or maintain a copy of the SSM plan is a deviation from the requirements of this subpart.

D.1.~~8~~**12** Monitoring [40 CFR 60.756]

D.1.~~9~~**13** Compliance Provisions [40 CFR 60.755]

D.1.~~10~~**14** Calculation of Non-methane Organic Compound (NMOC) Rate [40 CFR 60.754]

D.1.~~11~~**15** Reporting Requirements [40 CFR 60.757]

D.1.~~12~~**16** Record Keeping Requirements [326 IAC 12] [40 CFR 60.758]

D.1.~~13~~**17** Recordkeeping for NESHAP for Asbestos Active Waste Disposal Sites [40 CFR 61.154]

D.1.18 Record Keeping and Reporting Requirements for NESHAP for Municipal Solid Waste Landfills [40 CFR 63.1980]

Pursuant to 40 CFR 63.1980, the Permittee shall:

(a) Keep records and reports as specified in 40 CFR 60, Subpart WWW, or in the Federal plan, EPA approved State plan or tribal plan that implements 40 CFR 60, Subpart Cc, whichever applies to this landfill, with one exception: The Permittee must submit the annual report described in 40 CFR 60.757(f) and Condition D.1.13(f) every 6 months.

(b) Keep records and reports as specified in the general provisions of 40 CFR 60 and 40 CFR 63 as shown in Table 1 of 40 CFR 63, Subpart AAAA. Applicable records in the general provisions include items such as SSM plans and the SSM plan reports. The SSM Plan report is due semi-annually.

D.1.19 Record Keeping Requirements

(a) To document compliance with Condition D.1.9, the Permittee shall maintain records of the VOC and HAP contents of the waste water received.

(b) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

Conclusion

The construction of this proposed modification shall be subject to the conditions of the attached proposed Part 70 Minor Source Modification No. 181-18276-00035. The operation of this proposed modification shall be subject to the conditions of the attached proposed Part 70 Significant Permit Modification No. 181-18503-00035.

Appendix A: Emission Calculations
VOC and HAP Emissions
From the Leachate Evaporation System (E-Vap) While Processing Industrial Wastewater

Company Name: Liberty Landfill, Inc.
Address: 8635 E. State Road 16, Monticello, IN 47960
MSM: 181-18276-00035
Reviewer: ERG/YC
Date: February 16, 2004

Process Description:

Max. Evaporation Rate:	12,000	gal/day	
Max. VOC in the Wastewater:	30,000	ppm	(This is provided by the source, which is greater than the VOC content of leachate)
Wastewater Density:	8.34	lbs/gal	
* Integral Control Equipment:	Existing Enclosed 2,500 scfm Landfill Flare		
Control Efficiency:	98.0%	(required by NSPS, Subpart WWW)	

* Note: Since the 2,500 scfm enclosed flare is considered an integral part of the E-Vap, the permitting level for the E-Vap will be determined using the potential to emit after the enclosed flare control.

1. Potential to Emit VOC/HAP of the E-Vap:

Since the VOC/HAP concentration in the received waste is expected to be highly variable, assume all the VOC emissions are equal to HAP emissions. Assume all the VOC/HAP in the wastewater is emitted to the atmosphere.

PTE of VOC/HAP (tons/yr) = 12,000 gal/day x 8.34 lbs/gal x 30,000 ppm x 1/1000,000 ppm x 365 day/yr x 1 ton/2000 lbs x (1-98%) = **11.0 tons/yr**

Appendix A: Emission Calculations
Combustion Emissions
From the LFG Combustion for Heating Purposes in the Leachate Evaporation System (E-Vap)

Company Name: Liberty Landfill, Inc.
Address: 8635 E. State Road 16, Monticello, IN 47960
MSM: 181-18276-00035
Reviewer: ERG/YC
Date: February 16, 2004

Fuel Input MMBtu/hr	Flow Rate scfm
6.6	200

	Pollutant					
	PM[a]	PM10[a]	SO_2[b]	NOx[a]	CO[a]	NMOC[c]
Emission Factor in lb/MMBtu	17.0 (lbs/MMscf)	17.0 (lbs/MMscf)	49.6 (ppmv)	40.0 (lbs/MMscf)	750 (lbs/MMscf)	595 (ppmv)
Potential Emission in tons/yr	**0.45**	**0.45**	**0.46**	**1.05**	**19.7**	**0.15**

[a] Emission Factors are from AP-42, Chapter 2.4 - MSW Landfills, Table 2.4-5 (11/98).
Assume PM emissions equal to PM10 emissions.

[b] The total inlet concentration of sulfur content compounds in AP-42, Chapter 2.4 - Municipal Solid Waste Landfills - Table 2.4-1 (AP-42, 11/98)

[c] The NMOC concentration is the default value in AP-42, Table 2.4-5 (11/98).

Methodology

PM/PM10, NOx, and CO Emissions (tons/yr) = Flow Rate (scfm) x 60 (min/hr) x 28.317 (l/scf) x 50% Methane Content x Emission Factor (lbs/MMscf) x 8760 (hr/yr) x 1 ton/2000 lbs

SO_2 Emissions (tons/yr) = Flow Rate (scfm) x Emission Factor (ppmv) /1000,000 x 1 atm / Gas Constant (0.7032 atm-cf/lb mole-R) / Temp (60F+ 460) x Mole weight of SO_2 (64 lbs/lbs mole) x 60 min/hr x 8760 hr/yr x 1 ton/2000 lbs

NMOC Emissions (tons/yr) = Flow Rate (scfm) x Emission Factor (ppmv) /1000,000 x 1 atm / Gas Constant (0.7032 atm-cf/lb mole-R) / Temp (60F+ 460) x Mole weight of Hexane (lbs/lbs mole) x 60 min/hr x 8760 hr/yr x 1 ton/2000 lbs x (1-98% control efficiency)